

Appln No. 09/385,822

Amdt date May 14, 2004

Reply to Office action of January 29, 2004

REMARKS/ARGUMENTS

Reconsideration and reexamination of the above-referenced application are hereby requested in view of the remarks below.

Claims 1 - 15 are pending in this application. In the Office action dated January 29, 2004, claims 13 - 15 were allowed and claims 1 - 12 were rejected under 35 U.S.C. § 103 as being unpatentable over Doll, U.S. Patent No. 6,226,400 and further in view of Shiraishi, U.S. Patent No. 5,903,276. Claim 1 is the sole independent claim in rejected claims 1 - 12.

Request for Acknowledgment of Information Disclosure Statement

Upon review of the file for this application, it was discovered that Applicant has not received an initialed copy of Applicant's Information Disclosure Statement ("IDS") filed on October 24, 2002 indicating that the Examiner has considered the references listed in the IDS. Applicant requests that an initialed copy of the FORM PTO/SB/08A/B be entered in the application file and returned to Applicant with the next communication from the Office in accordance with MPEP § 609. For the Examiner's convenience, copies of the transmittal form and the FORM PTO/SB/08A/B for the IDS are attached as an Appendix to this Amendment.

Applicant's Response to the Rejection of Claim 1

Claim 1 recites as follows:

1. A method of eliminating unwanted steps at edges in image representations in the line raster, in particular in on-line operation, characterized by the steps:

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a) application of an edge operator to a rastered image portion for coarsely ascertaining at least one rastered edge configuration in the rastered image portion,

b) determining the position of at least a first pixel from the amount of those pixels which form the rastered edge configuration or adjoin said rastered edge configuration,

c) approximation of a straight line for ascertaining a probable configuration of the unrastered image edge in the proximity of the first pixel,

d) ascertaining a criterion from the approximation straight line and the position of the first pixel for mixing a color X to the color C in the first pixel considered, and

e) mixing the ascertained color X to the color C in the first pixel considered.

The Examiner contends at paragraph 6 of the Office action that Doll "discloses a method of eliminating unwanted steps at edges in an image representation in the line raster" and that Doll discloses elements a, b and c as follows:

Element a: (Figure 2).

Element b: ("the string sequencer 30 then uses the pixel location 32 of the current target pixel, the surface string IDs 24, and the surface string slopes 28 to generate string sequences 34 which define the color borders of the raster image", column 14, line 3-7).

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Element c: ("A string sequence 34 comprises a sequence of connected surface string IDs 24 in an order that follows the contour of the color border", column 14, line 7-9.).

The Examiner then acknowledges that Doll does not teach elements d and e of claim 1. To address this deficiency, the Examiner proposes incorporating the teaching of Shiraishi into Doll. The Examiner's position is that it would have been obvious to make this modification because "Doll discloses a method of defining a border of a raster image and Shiraishi discloses the color along the image border can be mixed in order to generate a smooth edge."

Applicant respectfully submits that this section 103 rejection is improper. It is well-settled that a *prima facie* case of obviousness cannot be established by merely locating references which describe various aspects of a patent applicant's invention. The Examiner must also "show some objective teaching in the prior art . . . that would lead [one of ordinary skill in the art] to combine the relevant teachings of the references." *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); see also, *Ex parte Levengood*, 28 USPQ2d 1300, 1302 (BPAI 1993)). Moreover, when the references do not explicitly provide such motivation, "[t]he test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those ordinary skill in the art."

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In re Kotzab, 217 F.3d 1365, 1370 (Fed. Cir. 2000) as quoted in MPEP 2143.01 (underlining added).

The Examiner fails to point to any objective evidence which would motivate one of ordinary skill in the art to combine the cited references given the problems to which each reference is directed. Doll deals with a completely different problem than the problem addressed by the invention of claim 1 or the problem addressed by Shiraishi.

Doll describes a method and a device for transforming a rastered image into a vector format. Borders of picture elements are identified and transformed into string sequences (Doll, Abstract). Thus, Doll deals with the problem that crossing borders or overlapping features of the image can be misinterpreted after a transformation from a rastered image representation to a vector format and back to a rastered representation. This results in a misperceiving of the image when converted back into raster format for display.

This problem is given the name "contrast tie", and is explained in more detail in the context of Figures 6A - 6C. A border in the background of a situation displayed may appear as a foreground feature in the rastered image after retransformation from the vector format. The method of Doll detects such contrast ties and manipulates color information in the perimeter of a contrast ties in order to give the correct three-dimensional impression in the displayed image. For this, the original raster representation is changed before transformation into a vector format.

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Applicant respectfully disagrees with the Examiner's contention in paragraph 6 of the Office action that Doll discloses a method of eliminating unwanted steps at edges in image representations in the line raster as claimed in claim 1. As discussed above, the method of Doll concerns the transformation of a raster representation of an image into a vector representation where a particular problem occurring in this transformation process, namely the occurrence of "contrast tie" is avoided by manipulating the image data before transformation into a vector representation.

There is no hint whatsoever in Doll to make use of some of the steps of his method in a post-anti-aliasing method as defined by claim 1. As set forth above, claim 1 is directed to a method of "eliminating unwanted steps at edges in image representations in the line raster." Moreover, this method has no relation to a transformation from a raster representation to a vector representation of an image.

Accordingly, as Doll is directed to an entirely different problem than the invention of claim 1, one skilled in the art seeking to eliminate unwanted steps at edges in image representations in the line raster, in general, would not be looked to Doll for assistance in this regard. Moreover, there is nothing to suggest that one skilled in the art would have been motivated to use Doll to provide the specific steps claimed in claim 1.

For a similar reason, one skilled in the art would not have been motivated to modify Doll to provide the invention of claim 1. First, there is no explicit teaching in Doll that the

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process of transformation from a raster representation to a vector representation of an image could be used with or would be improved by the polygon rendering techniques taught by Shiraishi.

Second, Doll teaches a method of addressing problems relating to converting a raster representation to a vector representation and back. There is no evidence of any implicit or known teaching in the art that indicates that the teachings of Shiraishi, in general, which relate to the polygon rendering process would prove useful in addressing the specific problems being addressed by Doll. Of even more significance, there is no evidence of any implicit or known teaching to modify Doll to incorporate the specific elements from Shiraishi identified by the Examiner as teaching elements d and e in claim 1 to solve such problems.

The Examiner's contention that "Shiraishi discloses the color along the image border can be mixed in order to generate a smooth edge" fails to provide the necessary motivation given that there is no evidence that Shiraishi solves any problem being addressed by Doll. In the absence of any indication that Shiraishi may solve some of the problems being addressed by Doll, it would make no sense for one skilled in the art to look to Shiraishi to solve these problems. Hence, Applicant respectfully maintains that it would not have been obvious to one skilled in the art to modify Doll using Shiraishi.

In view of the above, Applicant submits that independent claim 1 and claims 2 - 12 that depend on claim 1 are not obvious in view of Doll and Shiraishi.

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Conclusion

For the foregoing reasons, Applicant submits that all claims are allowable over the cited references. Accordingly, Applicant respectfully requests allowance of this application. If there are any remaining issues regarding the rejection of the claims over the cited references, Applicant requests that the Examiner contact the undersigned at the number indicated below.

Respectfully submitted,

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